

Perceptions of Wisdom Associated with Selected Occupations and Personality Characteristics

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Few studies have examined the factors that influence individuals' perceptions of wisdom, and the types of persons who are generally perceived to be wise. In the present study, 277 college students made ratings of the level of wisdom typically associated with 96 personality characteristics and 96 occupations. Differences in the magnitude of the mean ratings for both sets of descriptors indicate that individuals perceive people who exhibit certain personality characteristics or hold certain occupations to possess substantially more wisdom than others. Factor analysis of the personality characteristics revealed a three-factor solution: perceptive judgment, egotism, and basic temperament dimensions. A separate factor analysis for occupations also revealed a three factor solution: a broad general factor, an educational attainment factor, and a spirituality factor.

Keywords—Wisdom, Perception, Occupation, Personality

It is only in the past two decades that wisdom has surfaced as a viable psychological construct to be examined in a systematic and scientific fashion (Blanchard-Fields, Brannan, & Camp, 1987). Unfortunately, the study of wisdom has been fraught with ambiguity and a striking lack of consensus among scientists as to how it should be theoretically defined and empirically measured. A review of the psychological literature reveals that writings on the subject of wisdom can be organized into two broad categories: the traditional approach and the perceptions of wisdom approach. Both lines of work ultimately seek to provide a universally accepted definition of the construct.

The traditional approach to the study of wisdom involves forming a definition of the construct on the basis of philosophical, intuitive, or experiential grounds. The goal of this approach is to then objectively measure wisdom in individuals, and, in doing so, identify wisdom's life-span developmental properties (Holliday & Chandler, 1986). Unfortunately, this approach has yielded over ten different definitions of wisdom, and in only a minority of those cases has the wisdom construct actually been operationally

defined and empirically tested (Sternberg, 1990 contains a detailed summary of a number of these theories). The second general research approach involves examining individuals' perceptions of wisdom. Like the traditionalists, psychologists who examine perceptions of wisdom assume that there should exist a universally agreed upon definition of wisdom, however, they differ as to how they believe that definition should be constructed. Psychologists within the perceptual tradition believe that wisdom can best be defined by querying laypersons for their opinions as to what characteristics make up a wise individual (Holliday & Chandler, 1986). By identifying an empirically based universal definition of wisdom, these psychologists hope to contribute a useful foundation for the development of theory and perhaps a method for uncovering the values and mores of a given culture (Clayton, 1982).

The present research effort falls squarely within this latter research tradition. The goal of this study is to further define the perceptual basis of the construct by ascertaining how individuals perceive wisdom to be related to different occupations and personality characteristics. Ultimately, research such as this can serve to inform those who work within the traditional vein by providing empirically based information regarding how wisdom is conceptualized by laypersons. However, before turning to the specifics of the present study, a brief review is provided of some of the more noteworthy findings which have emerged from within the perceptual camp.

Studies of contemporary perceptions of wisdom are limited in number and scope. Psychologists have investigated individuals' perceptions of wisdom using three different methodological techniques: (a) by having subjects generate lists of characteristics typical of wise people (Brent & Watson, 1980; Clayton & Birren, 1980; Holliday, 1981, as cited in Holliday & Chandler, 1986; Holliday & Chandler, 1986; Sternberg, 1985); (b) by having subjects nominate individuals whom they perceive to be wise (Baltes, Staudinger, Maerker, & Smith, 1995; Denney & Dew, 1992; Perlmutter, Adams, Nyquist, & Kaplan, 1988, as cited in Orwoll & Perlmutter, 1990); and (c) by having subjects rate whether different descriptors (e.g., experienced, intelligent, careless) are characteristic of wise individuals (Clayton & Birren, 1980; Heckhausen, Dixon, & Baltes, 1989; Holliday & Chandler, 1986; Sternberg, 1985). Below we review a subset of the studies which have direct bearing on the present research.

Clayton and Birren (1980) were interested in examining the underlying structure of wisdom as perceived by individuals across the life span. In a pilot study, subjects were asked to generate a list of descriptors of a wise person. This resulted in the identification of a set of twelve commonly mentioned descriptors: experienced, intuitive, introspective, pragmatic, understanding, gentle, empathetic, intelligent, peaceful, knowledgeable, sense of humor, and observant. In a follow-up to the pilot study, young, middle-age, and older subjects rated paired combinations of the descriptors, and these ratings were then analyzed using multi-dimensional scaling techniques. Although the results of this analysis did identify developmental differences in subjects' perceptions of wisdom, the more general finding was that regardless of age, individuals perceived wisdom to include cognitive, affective, and reflective components.

Holliday and Chandler (1986; Study II) used prototypicality ratings of descriptors in order to identify the underlying dimensions of wisdom. They had 150 men and women

use a 7-point scale to rate 79 descriptors in terms of how indicative each was of a wise person. Factor analysis of the data revealed that the wisdom construct was characterized by five basic dimensions: (a) exceptional understanding (has learned from experience; sees things within a larger context); (b) judgment and communication skills (is a good source of advice; reflective); (c) general competencies (curious; intelligent; experienced); (d) interpersonal skills (fair; reliable, mature); and (e) social unobtrusiveness (discreet; non-judgmental; quiet). Like Clayton and Birren (1980), Holliday and Chandler found evidence to suggest that the concept of wisdom is firmly embedded in our culture and is multidimensional in nature.

In another study, Sternberg (1985) used multidimensional scaling techniques to identify the structural basis of wisdom. He concluded that the wisdom construct contains six basic components: reasoning ability, sagacity, learning from ideas and from the environment, judgment, expeditious use of information, and perspicacity. According to Sternberg, these six components organize into a "reasoning polarity" and a "sagacity polarity" that are equal in nature to Clayton and Birren's (1980) reflective and affective dimensions, respectively.

Other researchers have also suggested that wisdom is best characterized as a multidimensional construct. As part of a larger study Holliday (1981, as cited in Holliday & Chandler, 1986) had college students use a Q-sort technique to describe a wise individual. He found that the descriptors associated with wisdom were organized into three general categories: personal competency, social understanding, and compassion. In another study Brent and Watson (1980) asked subjects to describe a wise person. Their analysis revealed that a wise person could; be characterized in terms of four clusters of attributes: person-cognitive, practical experimental, interpersonal, and moral/ethical. Finally, Farrell and Hershey (1996) asked college students to provide written descriptions of a prototypically wise person. Content analysis of these descriptions revealed four common clusters of descriptors: (a) cognitive and intellectual abilities; (b) perceptive and intuitive skills; (c) knowledge acquired through life experience; and (d) problem solving and decision making abilities.

The goal of the present study is to examine the extent to which individuals perceive wisdom to be related to different occupations and personality characteristics. Our purpose in this effort is twofold. The first is to further extend the empirical foundation of research on perceptions of wisdom. In light of the perceptual research cited above, our study of the wisdom ratings associated with different personality characteristics should provide converging evidence for a general perceptual model of the wisdom construct. The occupational ratings, however, stand to make a unique contribution to research on this topic. We have yet to identify a single study which has used prototypicality ratings to examine the extent to which wisdom is associated with one's form of employment.

The second purpose for conducting the present study is to establish a set of normative data which can be used for further research purposes. Specifically, we see this data collection effort as a necessary first step in a larger research program designed to examine the cognitive underpinnings of individuals' perceptions of wisdom (Farrell & Hershey, 1995; Hershey, Farrell, Collins, Allaire, & Rosenberg, 1996). In that line of

work, we have used descriptors of personality and occupation to activate individuals' stereotypes of a target individual, in order to examine how automatic stereotyping processes (Banaji & Hardin, 1996) influence the person perception process (Kenny, 1991). It has been argued (Simon, 1992) that psychologists need to attempt to integrate theories of cognition and theories of person perception in an effort to advance theories of social cognition.

METHOD

Participants

Participants were 277 undergraduate students (155 women and 122 men) who were attending a large suburban university. Members of the sample ranged in age from 17 to 54 years ($M = 20.7$; $SD = 5.3$), and they had completed an average of 13 years of formal education at the time of testing. A large majority of the subjects were members of introductory psychology courses, and all participants received partial course credit for having completed the survey.

Procedure & Materials

The survey¹ was administered to groups of individuals which ranged in size from 3 to 75 persons. Participants were told that the purpose of the study was to examine people's perceptions of wisdom, and in order to do so, they would be asked to rate the level of wisdom exhibited by individuals who possess certain occupations and personality characteristics. Prior to making the ratings, subjects were asked to write a brief (two to three sentence) definition of wisdom in order to stimulate their thoughts on the topic. They were then instructed to use a seven point Likert-type scale (1 = extremely unwise; 7 = extremely wise) to rate the level of wisdom typically associated with each of the 96 occupations and 96 personality characteristics. Occupations were selected from the *Occupational Outlook Handbook* (U.S. Dept. of Labor, 1992) and personality characteristics were compiled using the *American Heritage Dictionary* (Berube, 1991).

Three guidelines were used in selecting occupations for inclusion in the study. First, we avoided the selection of occupations which were highly technical, and thus, we reasoned, would be unfamiliar to subjects. Second, we attempted to select a set of occupations which would be roughly balanced in terms of the proportion of unskilled and professional positions. Finally, we attempted to select a set of occupations which we believed would elicit high, moderate, and low perceptions of wisdom. Our goal in selecting a potentially wide range of wisdom-linked occupations was to ensure that there would be sufficient variability in subjects' ratings to conduct meaningful analyses (particularly factor analyses, where a reasonable amount of variability would be critical to our ability to discriminate between multiple factors).

A similar set of goals guided our selection of personality characteristics. That is, we attempted to avoid characteristics which might be unfamiliar to subjects, we attempted to select a balance of characteristics which are generally perceived as positive and

negative, and as was the case with the occupations, we chose characteristics which we believed would be associated with high, moderate, and low perceptions of wisdom.

The set of occupations were listed on one page of the rating booklet and the personality characteristics were listed on a separate page. The presentation of the two rating sheets was counterbalanced to guard against order effects. Subjects were given an unlimited amount of time to complete their ratings.

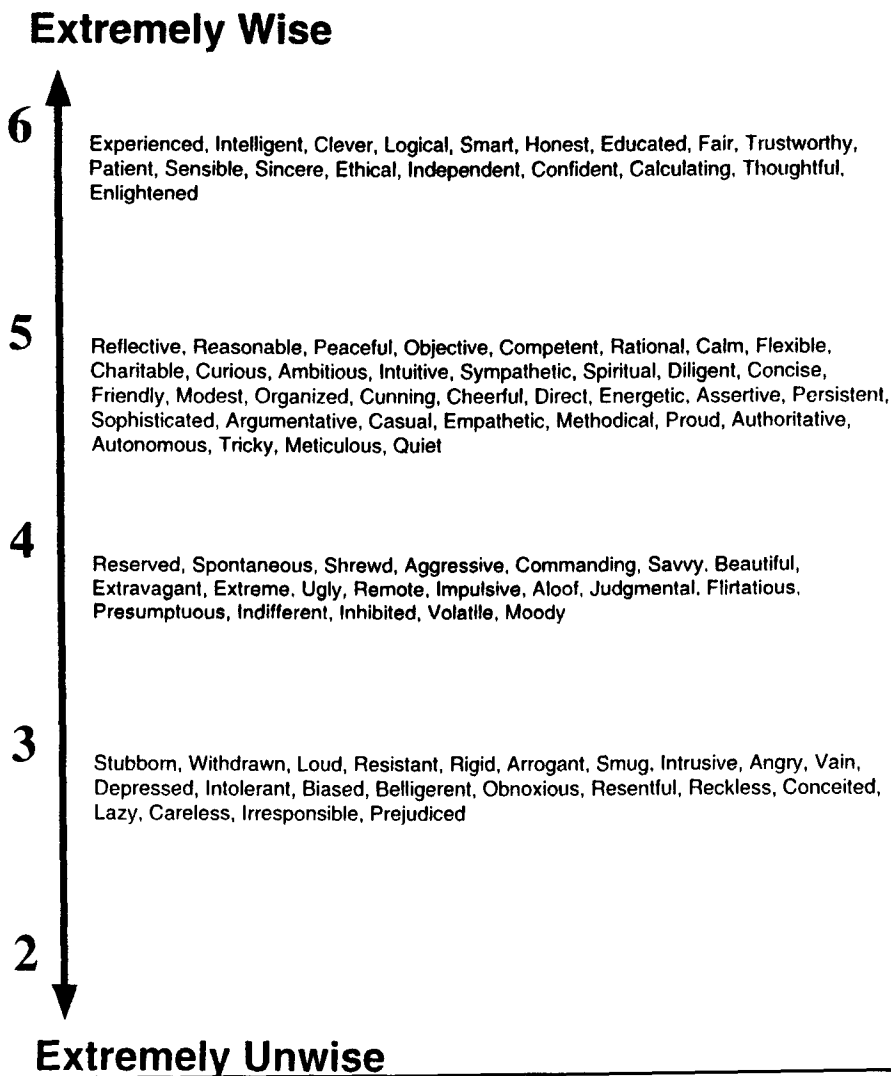
RESULTS

Perceptions of Personality Characteristics

Means and standard errors were computed as an initial step toward determining whether individuals associated differential levels of wisdom with the various personality characteristics. Figure 1 shows each of the 96 characteristics rank ordered in terms of the magnitude of their mean, plotted along a truncated range of the seven point scale. Subjects were found to have used all seven positions on the scale, which provides initial support for the notion that they indeed associated differential levels of wisdom with the various descriptors. The personality characteristics are grouped into four different clusters on the basis of their mean scores, those which could be considered low wise characteristics (in the 2–3 point range); moderately low wise characteristics (in the 3–4 point range); moderately high wise characteristics (in the 4–5 point range); and high wise characteristics (in the 5–6 point range). Within each of the four clusters the characteristics are ordered in terms of magnitude (e.g., reflective was the largest mean in the 4–5 point cluster, and quiet was the smallest). The grand mean for all 96 personality characteristics was 4.03, a value which corresponds to the midpoint of the scale indicating an “average” level of wisdom. The three characteristics with the largest mean ratings were experienced ($M = 5.74$); intelligent ($M = 5.62$); and clever ($M = 5.51$). In contrast, the three characteristics found to have the lowest perceived level of wisdom were prejudiced ($M = 2.08$); irresponsible ($M = 2.15$); and careless ($M = 2.22$). The standard errors for the means ranged from a low of .062 (logical) to a high of .097 (tricky), with an average standard error of .075. These relatively small variance parameters (evaluated in relation to the four point range in mean ratings) suggest that there was substantial consensus across individuals as to the level of wisdom typically associated with each of the characteristics.²

Next, factor analysis techniques were employed in an effort to better understand the conceptual dimensions subjects used to make their ratings. An initial principal components analysis of the 96 characteristics resulted in the extraction of 25 factors with eigenvalues greater than 1.0. A scree plot of these eigenvalues revealed that the data could best be interpreted using a three or four factor solution. Therefore, two additional runs were computed which forced three and four factor outcomes. As a final step in the analysis the data matrix was transformed into terminal factors using varimax rotation.³ The three factor solution provided for a set of clearly interpretable dimensions, whereas the four factor case added little or no information over and above that found in the three factor model.

FIGURE 1
Mean Ratings for the 96 Personality Characteristics Ordered in Terms of Magnitude



Notes: The highest rated characteristic was experienced ($M = 5.74$), the lowest was prejudiced ($M = 2.08$). Means for the descriptors are divided into four conceptual groupings, low wise characteristics (in the 2–3 point range), moderately low wise characteristics (3–4 points), moderately high wise characteristics (4–5 points) and high wise characteristics (5–6 points).

Table 1 displays the adopted three-factor solution. Taken together, these three factors account for 33.4 percent of the variance in subjects' ratings. For presentation purposes, across all three factors personality characteristics with loadings in the .40–.49 range are shown in uppercase and lowercase type, and characteristics with loadings greater than .50 are shown in all capital letters. Descriptors on this list are ordered in decreasing magnitude. Descriptors with loadings of less than .40 were omitted from the list. The first factor, which has an eigenvalue of 14.2, has been labeled Perceptive

TABLE 1
Three-Factor Solution for the 96 Personality Characteristics
Rated in Terms of Level of Wisdom

Factor 1: Perceptive Judgment		Factor 2: Egotism	Factor 3: Basic Temperament
<u>Positive Loadings</u>	<u>Negative Loadings</u>	<u>Positive Loadings</u>	<u>Positive Loadings</u>
SINCERE	OBNOXIOUS	EXTRAVAGANT	WITHDRAWN
FAIR	INTOLERANT	PRESUMPTUOUS	Quiet
PEACEFUL	RESENTFUL	CASUAL	Reflective
CHARITABLE	IRRESPONSIBLE	FLIRTATIOUS	
TRUSTWORTHY	CONCEITED	COMMANDING	<u>Negative Loadings</u>
THOUGHTFUL	CARELESS	ARROGANT	ARGUMENTATIVE
FRIENDLY	DEPRESSED	Vain	Aggressive
CALM	RECKLESS	Volatile	Intelligent
PATIENT	Moody	Proud	Authoritative
SYMPATHETIC	Vain	Smug	Ambitious
HONEST	Rigid	Beautiful	
ETHICAL	Loud	Savvy	
Objective	Lazy	Authoritative	
Direct	Prejudiced	Impulsive	
Flexible	Resistant	Ambitious	
Independent	Belligerent	Spontaneous	
Reflective	Intrusive	Autonomous	
Confident	Angry	Conceited	
Rational	Presumptuous	Cheerful	
Sensible	Biased	Intolerant	
Logical	Smug	Extreme	
Enlightened		Energetic	
Responsible		Angry	
Spiritual		Resentful	
		Moody	
		Independent	
		Confident	
		Organized	
		Rigid	

Note: Descriptors in upper/lowercase have loadings greater than .40 and less than .50. Those in all capital letters have loadings greater than .50.

Judgment. This bipolar factor includes 45 descriptors, 24 of which have positive loadings greater than .40, and 21 of which have negative loadings less than $-.40$. The first characteristic, sincere had the largest positive loading on the first factor, and spiritual had the smallest positive loading.

The descriptors which load on the first factor suggest that it contains both intrapersonal and interpersonal components, as well as a cognitive/judgment dimension. Positive characteristics which capture the essence of the intrapersonal component include characteristics such as peaceful, patient, and confident. The positive interpersonal component is exemplified by descriptors such as sincere, friendly, sympathetic, and direct.

Elements which have positive loadings that suggest a cognitive component include thoughtful, objective, rational, and logical. Negative intrapersonal descriptors include resentful, moody, and lazy, whereas exemplars of negative interpersonal descriptors include obnoxious, prejudiced, and belligerent. Negative cognitively oriented descriptors include careless, rigid, and biased. It is clear that descriptors with positive loadings on this factor are indicative of a wise individual and descriptors with negative loadings are indicative of one who is unwise.

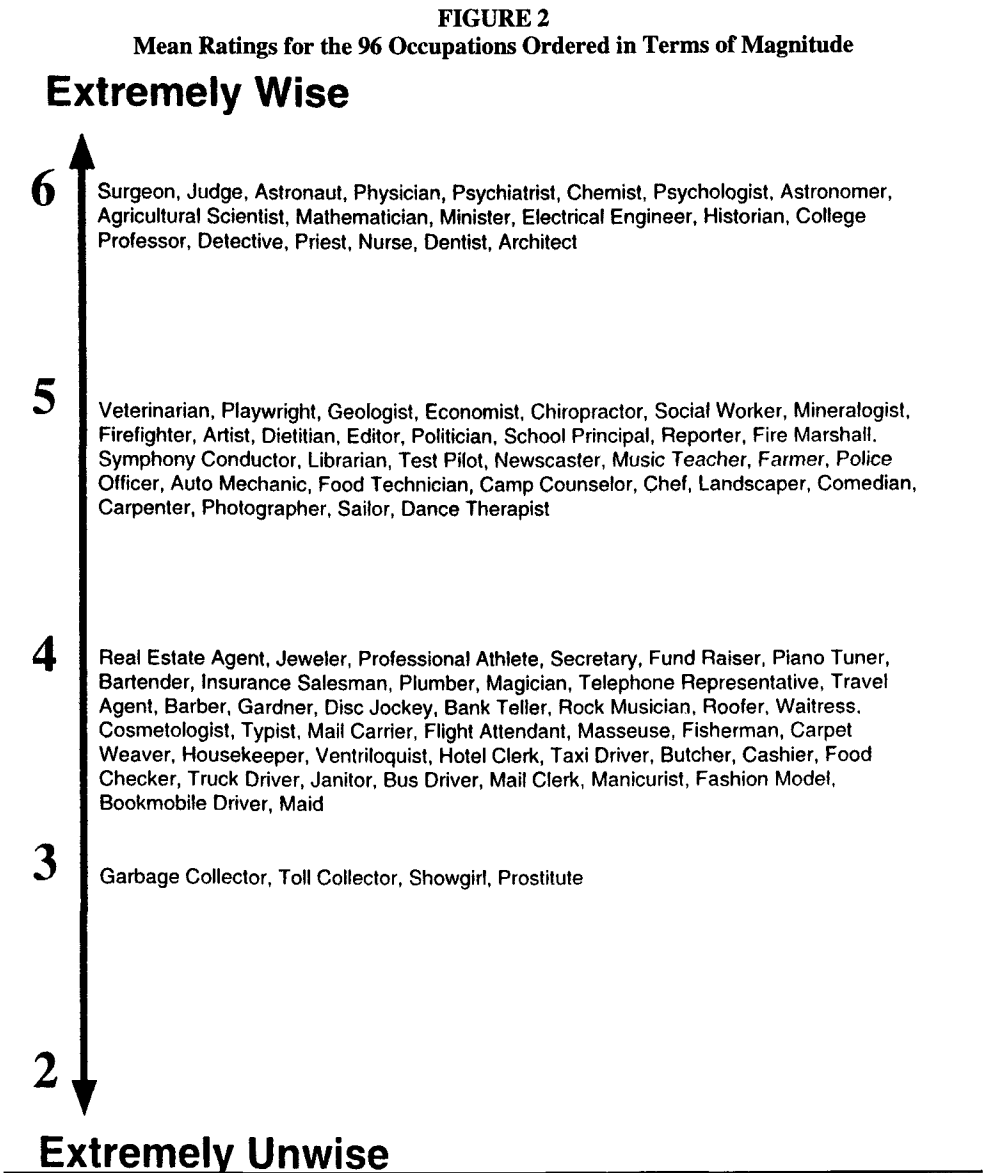
The second factor, which has an eigenvalue of 13.2, has been labeled Egotism. This unipolar dimension includes 29 descriptors.⁴ This factor appears to include components of both extroversion and self-centeredness. Characteristics which are examples of the former include extravagant, impulsive, and energetic, whereas examples of the latter include arrogant, vain, and intolerant. There also appear to be descriptors for this factor which suggest somewhat of a single-minded, structured approach to the world, exemplified by substantial loadings for characteristics such as organized, rigid, and commanding. Descriptors which load on this factor are clearly indicative of one who is unwise.

The third factor, which has an eigenvalue of 4.7, has been labeled Basic Temperament. This bipolar dimension includes eight descriptors, three of which are positive and five of which are negative. Characteristics that have positive loadings on this factor (e.g., withdrawn, quiet, reflective) are indicative of one who is highly contemplative. In contrast, personality characteristics with negative loadings on this factor (e.g., argumentative, aggressive, ambitious) are suggestive of one who lacks introspective awareness. In general, descriptors with positive loadings on this factor are indicative of a wise individual and those with negative loadings are indicative of one who is unwise.

In summary, the results of this factor analysis provide insights into which characteristics individuals consider to be indicative of wise or unwise persons. The wise individual is one who is capable of making perceptive judgments, and has a quiet, reflective nature. The unwise person, in contrast, is one who is egotistical, and displays an overly aggressive and argumentative temperament.

Perceptions of Occupations

Analyses of subjects' ratings of occupations closely paralleled the analyses carried out on the personality characteristics. First, means and standard deviations were computed in order to determine whether subjects associated differential levels of wisdom with the various occupations. Before administering the survey we had considered the possibility that some subjects might perceive wisdom to be associated with individual level variables such as specific personality characteristics, or one's unique cognitive style. A person who holds such a view could conceivably make the argument that wisdom is not at all related to occupational status; a fisherman would be just as likely to be as wise as a secretary or a judge. In completing the survey, such an individual would be expected to rate each of the occupations as having the same "wisdom value," that is, presumably a rating of 4, corresponding to an average level of wisdom. Of the



Notes: The highest rated occupation was surgeon ($M = 5.80$), the lowest was prostitute ($M = 2.16$). Means for the occupations are divided into four conceptual groupings, low wise positions (in the 2–3 point range), moderately low wise positions (3–4 points), moderately high wise positions (4–5 points), and high wise positions (5–6 points).

277 individuals who completed the survey only two scored the occupations in this fashion, which indicates that greater than 99 percent of respondents believed that levels of wisdom covaried with occupational status.

As in the case of ratings for the personality characteristics, subjects' ratings for occupations ranged from 1 through 7, the lowest possible score to the highest. Mean ratings for each of the 96 occupations are shown in Figure 2. Again, these mean scores

are plotted along a truncated range of the measurement scale, divided into four clusters of items: low wise occupations (2–3 point range); moderately low wise occupations (3–4 pts.); moderately high wise occupations (4–5 pts.); and high wise occupations (5–6 pts.). The average mean rating across all occupations was 4.14, which corresponds to an average level of wisdom on the seven point scale. Two occupations tied for the largest mean rating: surgeon ($M = 5.80$) and judge ($M = 5.80$), followed closely by astronaut ($M = 5.68$) and physician ($M = 5.67$). Occupations which earned the lowest mean ratings were prostitute ($M = 2.16$), showgirl ($M = 2.58$), toll collector ($M = 2.83$), and garbage collector ($M = 2.96$). Standard errors for the occupations ranged from a low of .062 (jeweler) to a high of .097 (prostitute), with an average standard error of .073.

The large majority of occupations (76 percent) were ranked in the moderate wisdom range, and proportionately more occupations were rated as high wise (20 percent) than low wise (4 percent). This suggests that subjects tend to perceive high levels of wisdom to be more likely correlated with occupational status than low levels of wisdom, at least, based on the set of occupations included in the survey. Another interesting finding was that the occupations rated as being high wise tended to be associated with advanced levels of education, and generally high levels of social standing (Hollingshead, 1958, 1975). In fact, a median split of the occupations into “more wise” and “less wise” groups revealed that 56 percent of 48 occupations in the more wise category required an advanced (college level) degree, whereas none of the 48 occupations in the less wise category required college level education. Based solely on these data, however, it is unclear whether it was educational level, per se, that influenced individuals’ wisdom ratings.

The occupation data were then subject to factor analysis in an effort to determine the conceptual dimensions which guided individuals’ ratings. The initial principle components analysis yielded 22 factors with eigenvalues greater than 1.0, and an inspection of the scree indicated that the majority of variance could be accounted for with a two or three factor solution. Both two- and three-factor outcomes were then forced, followed by transformation of the data into terminal factors using varimax rotation. Although both resulting solutions were quite similar, the third factor in the three-factor case was clearly interpretable, therefore we chose this solution for further scrutiny.⁵

Table 2 shows the adopted three-factor solution. Taken together, the combination of factors account for 44.2 percent of the variance in subjects’ ratings. The first factor, which is a broad general factor, has an eigenvalue of 25.9. Indeed, the factor is so broad that 79 of the 96 occupations sampled were shown to load on this dimension. The minimum inclusionary criteria for the occupations shown in Table 2 was a factor loading of .40. Occupations with loadings in the .40–.59 range are presented in uppercase and lowercase type, those with loadings greater than .60 are presented in all capital letters. Again, similar to Table 1, occupations are presented in descending order based on the magnitude of the loading. For the first factor, which has two columns of positive loadings, occupations alternate columns in descending order. Therefore, piano tuner had the highest loading, followed by hotel clerk, roofer, typist, chef . . . psychologist, economist, and playwright.

TABLE 2
Three-Factor Solution for the 96 Occupations Rated in Terms of Level of Wisdom

Factor 1: Broad General Factor		Factor 2: Educational Attainment	Factor 3: Spirituality
<u>Positive Loadings</u>		<u>Positive Loadings</u>	<u>Positive Loadings</u>
PIANO TUNER	HOTEL CLERK	CHEMIST	Minister
ROOFER	TYPIST	ASTRONOMER	Priest
CHEF	MAIL CARRIER	MATHEMATICIAN	
TRAVEL AGENT	TELEPHONE REP	ELECTRICAL ENGINEER	
PHOTOGRAPHER	SECRETARY	SURGEON	
PLUMBER	DIETITIAN	ARCHITECT	
FIRE MARSHALL	DISC JOCKEY	ASTRONAUT	
INSURANCE SALES	FLIGHT ATTENDANT	Physician	
CASHIER	SYMPH CONDUCTOR	Psychiatrist	
SCHOOL PRINCIPAL	NEWSCASTER	College Professor	
MANICURIST	VENTRILOQUIST	Dentist	
BOOKMOBILE DRIVER	FOOD TECHNICIAN	Psychologist	
Bank Teller	Housekeeper	Mineralogist	
Dance Therapist	Real Estate Agent	Agricultural Scientist	
Food Checker	Barber	Veterinarian	
Music Teacher	Chiropractor	Judge	
Mail Clerk	Cosmetologist	Economist	
Butcher	Sailor	Geologist	
Landscaper	Masseuse	Detective	
Carpenter	Jeweler	Nurse	
Editor	Reporter	Historian	
Gardener	Nurse		
Comedian	Veterinarian	<u>Negative Loadings</u>	
Toll Collector	Social Worker	GARBAGE COLLECTOR	
Fund-raiser	Geologist	BUS DRIVER	
Carpet Weaver	Magician	JANITOR	
Fire Fighter	Maid	Maid	
Bus Driver	Farmer	Taxi Driver	
Librarian	Camp Counselor	Toll Collector	
Waitress	Architect	Bookmobile Driver	
Auto Mechanic	Truck Driver	Fisherman	
Garbage Collector	Dentist	Prostitute	
Fashion Model	Electrical Engineer	Truck Driver	
Physician	Taxi Driver	Butcher	
Fisherman	Bartender	Mail Clerk	
Psychiatrist	Test Pilot		
Artist	Detective		
Mineralogist	College Professor		
Psychologist	Economist		
Playwright			

Note: Descriptors in upper/lowercase have loadings greater than .40 and less than .60. Those in all capital letters have loadings greater than .60.

One interpretation of the observation that so many occupations load on the first factor is that subjects view wisdom as a construct which is not (or is only weakly) linked to most occupations. It is possible, as mentioned earlier, that a person holding most any occupation can be wise, irrespective of whether that person is piano tuner, playwright, social worker, or comedian. The large positive manifold found on the first factor is also indicative of consistent individual differences in ratings (J. L. Horn, personal communication, October 5, 1996). That is, subjects who tended to make small ratings for one occupation, also tended to make small ratings for other occupations. Likewise, individuals who tended to make large ratings for a given occupation, tended to make large ratings for other occupations. Unfortunately, this outcome provides only limited information about the nature of the discriminations individuals made as they assigned their ratings. Therefore, the other two factors need to be examined for more specific insights into the way in which perceptions of wisdom are related to occupational status.

The second factor, which has an eigenvalue of 12.9, has been labeled Educational Attainment. This bipolar factor includes 33 occupations, 21 of which have positive loadings, and 12 of which have negative loadings. Virtually all of the occupations with positive loadings are jobs which require significant, formal post-secondary education (with the exception of detective). In contrast, none of the occupations which load negatively on this factor are occupations which require college-level training. In fact, most if not all of the occupations with negative loadings on the second factor, are positions one could conceivably hold without ever having completed high school.

The third factor, which has an eigenvalue of 3.8, has been labeled Spirituality. Only two occupations were found to load on this dimension: minister and priest. There were two additional pieces of evidence to suggest that these occupations were perceived to be unique. The first is that neither of the two occupations were found to load on either of the other two factors. The second piece of evidence is that loadings for the other 94 occupations on the spirituality factor were almost uniformly near zero (the mean of the absolute values of the 94 loadings was .14).

In summary, the factor analysis of the occupational ratings suggest that the amount of education and the level of spirituality typically associated with a vocation influence individuals' perceptions of wisdom. At the same time, however, the data indicate that subjects believe that wise persons can be employed in most any occupation.

DISCUSSION

The results of the personality analyses are in many ways consistent with findings from previous studies, and in other ways make a unique contribution to the perceptual literature on wisdom. More specifically, the dimensions identified as being associated with a wise individual in the present study are consistent with dimensions identified by other researchers. In the present study it was found that those who are perceived to be wise are those capable of making perceptive judgments, and persons who have an inward-directed, reflective temperament. These same dimensions can be found in the prototype of the wise individual as characterized by both Clayton and Birren (1980)

and Holliday and Chandler (1986). For instance, Clayton and Birren (1980) suggested that the wise individual is one who is characterized by cognitive, affective, and reflective qualities. In the present study, the personality descriptors found in factor one include both cognitive and affective components, and the basic temperament dimension (factor three) corresponds to Clayton and Birren's reflective dimension.

The set of descriptors which led Holliday and Chandler (1986) to identify a five factor model of wise individuals also compares favorably with elements of our three factor model. For instance, their judgment and communication skills factor, and their interpersonal skills factor can be viewed as having much in common with our perceptual judgment dimension. Similarly, the descriptors which make up their social unobtrusiveness dimension appear to be quite similar to the descriptors which define the positively loaded pole of our basic temperament dimension.

Our selection of a set of personality characteristics was designed to elicit both wise and unwise ratings, which allowed us to define unique dimensions that might best be described as antithetical to the wisdom construct. Our inclusion of characteristics indicative of unwise individuals allowed us to learn something about the characteristics of a prototypically unwise person. Specifically, we found that one who is perceived to be egotistical and aggressively argumentative would, in general, not be perceived to be one who is also wise. This dimension to our work (i.e., considering the characteristics of those who are unwise) stands out as being different from most other studies of wisdom. In prior studies, subjects have typically been asked to make ratings of the wisdom associated with characteristics thought to be associated with wise persons.

Findings from the occupational analyses provide other unique contributions to the psychological literature on perceptions of wisdom. As pointed out above, in our review of the literature we had not identified any articles which addressed the issue of the relationship between one's occupation and level of wisdom. Based on the mean score analysis we found it interesting that individuals perceived a relatively wide range of wisdom associated with different occupations. Given the variability in those means, we found it even more interesting (and somewhat counterintuitive) to find such a broad first factor emerge in the factor analysis. One way to reconcile these two apparently conflicting findings is to assume that individuals make a distinction between what is *typical* in terms of the relationship between occupations and wisdom, and what is *plausible* between the two. Specifically, one might hold the opinion that on average, surgeons are wiser than prostitutes. However, at the same time, it is not inconceivable that a prostitute can be quite wise.⁶ Thus, when discussing the relationship between occupations and levels of wisdom it appears important to distinguish between what the relationship typically is, and what the relationship possibly can be.

The fact that occupationally based perceptions of wisdom were also related to one's level of education is also an interesting finding. Others studies have shown a perceived link between education and wisdom (Farrell & Hershey, 1996; Holliday & Chandler, 1986; Orwoll & Perlmutter, 1990), however, this association has typically been established by explicitly asking subjects if the two are in some way related. The emergence of an educational attainment dimension in the context of a set of occupational ratings

provides compelling evidence that one's educational level is implicitly taken into account when evaluating whether or not another is wise.

Finally, we were intrigued to find the emergence of the spirituality dimension in the factor analysis. What specifically is it about ministers and priests that lead individuals to consider them to be uniquely wise? Is it because individuals in these positions typically lead contemplative and reflective lives? Is it because they have had the opportunity to see human nature at its best and worst? Or is it that they are viewed as problem solvers, often in the position of advising others? Unfortunately, the nature of the present data don't allow for answers to these questions. Perhaps future studies might explore what specifically it is about those who hold these two positions that lead subjects to consider them as being so different from so many other types of occupations. We also find ourselves wondering whether occupations such as rabbi, monk, shaman, and bodhisattva would have also loaded on this factor, had they been included in the survey.

This study stands to make both theoretical and applied contributions to the psychological literature on wisdom. On a theoretical level, the factor analyses serve to further extend our understanding of the dimensions which guide individuals' perceptions. The identification of the wisdom-related personality factors provide converging evidence for the type of person who is considered to be wise (and unwise), and the occupation factors provide insights into how perceptions of wisdom are mediated by employment status. This latter set of findings, in particular, represent a novel contribution to the literature. The second, more applied contribution involves the value of establishing normative rating data for future research efforts. One of our primary goals in conducting this study was to obtain normative data for use in vignette-based experimental studies on person perceptions of wisdom. In fact, in our laboratories we have successfully used certain occupations in story based research to elicit stereotypical perceptions of a high-wise individual (e.g., using a physician as target) and a low-wise individual (e.g., using a toll collector as target) (Farrell & Hershey, 1995; Hershey, Farrell, Collins, Allaire, & Rosenberg, 1996). We believe that the personality factors can just as successfully be incorporated into vignettes in order to implicitly guide subjects' person perceptions of wisdom. By embedding particular personality or occupational descriptors within scenarios, investigators can create a specific 'mind set' in order to experimentally test hypotheses regarding the power that stereotypes have in structuring person perceptions.

Although there is clear value in studies such as the present one, it is also recognized that this line of work is ultimately limited. It was suggested in the introduction that the original impetus for the study of individuals' perceptions of wisdom was to establish an empirically grounded, universal, culturally based definition of wisdom. To a great extent, that aim has been accomplished. It would seem that a more ambitious and profitable research agenda at this point would be to focus attention on the cognitive processes that underlie individuals' perceptions of wisdom. Such an approach would help to advance theory by establishing the mechanisms which are responsible for commonalties in perceptions across individuals, and at the same time it would allow us to begin to explore the basis of individual differences in person perceptions of wisdom.

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NOTES

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1. The data reported in this article were collected as part of a larger data collection effort which focused on individuals' perceptions of wisdom.

2. A complete listing of the means and standard errors for the personality characteristics and occupations are available upon request.

3. A three-factor oblique solution was also examined, however it failed to increase interpretability over that of the more parsimonious orthogonal case.

4. Some of the descriptors on this factor also had significant loadings on the first and third factors. In order to facilitate interpretation, loadings on multiple factors were permitted, as long as they were greater than the minimum criteria of .40.

5. Given the exploratory nature of the occupational ratings, oblique solutions were also considered for the three- and four-factor cases, however, these solutions failed to change the overall pattern of findings or sufficiently increase interpretability.

6. We found ratings for the prostitute to be particularly intriguing. As mentioned before, it was the occupation which was found to have the largest standard error of the mean. An inspection of the raw score distribution revealed a bimodal split in subjects' ratings. Most subjects rated prostitutes as unwise, whereas others rated them as extremely wise. After completing the survey a number of subjects shared with us the impression that prostitute was a difficult occupation to rate, because on the one hand, one could consider a prostitute to be unwise due to obvious occupational hazards. On the other hand, some indicated that of all of the occupations listed, prostitutes should rank fairly high on the scale because they have seen a great deal, they have had to deal with many challenging situations, and they are typically very "street-wise."

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